

# **BELLSOUTH COMMENTS**

WC Docket No. 05-25  
RM-10593

June 13, 2005

**Attachment 7**

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Special Access Rates for Price Cap Local	)	WC Docket No. 05-25
Exchange Carriers	)	
	)	
AT&T Petition for Rulemaking	)	
To Reform Regulation of Incumbent	)	RM 10593
Local Exchange Carrier Rates for	)	
Special Access Services	)	

**Declaration of  
Harold Furchtgott-Roth and Professor Jerry Hausman**

**I. Introduction**

*A. Qualifications*

Below, we present our qualifications.

*Harold Furchtgott-Roth*

I am president of Furchtgott-Roth Economic Enterprises, an economic consulting firm. I was a commissioner at the Federal Communications Commission (FCC) or Commission from November 1997 through the end of May 2001. My statements as a commissioner at the FCC have been cited by federal courts. I have been a guest speaker at many conferences for the telecommunications industry. One of my responsibilities is serving on the board of the Telecommunications Policy Research Conference, one of the primary forums for research on telecommunications issues in the United States. From

June 2001 through March of 2003, I was a visiting fellow at the American Enterprise Institute for Public Policy Research (AEI) in Washington, DC.

I have worked for many years as an economist. From 1995 to 1997, I was chief economist of the House Committee on Commerce where one of my responsibilities was to serve as one of the principal staff members helping to draft the Telecommunications Act of 1996. From 1988 to 1995, I served as a senior economist at Economists Incorporated where I worked on econometric matters in regulatory, antitrust, and commercial litigation cases. These cases included many matters in the broadcast, cable, and telecommunications industries. From 1984 to 1988, I served as a research analyst at the Center for Naval Analyses where I conducted quantitative studies on behalf of the Department of the Navy.

My academic research concerns economics and regulation. I am the coauthor of three books: *Cable TV: Regulation or Competition*, with R.W. Crandall, (Washington, DC: The Brookings Institution), 1996; *Economics of A Disaster: The Exxon Valdez Oil Spill*, with B.M. Owen, D.A. Argue, G.J. Hurdle, and G.R. Mosteller, (Westport, Connecticut: Quorum books), 1995; and *International Trade in Computer Software*, with S.E. Siwek, (Westport, Connecticut: Quorum Books), 1993. I am a frequent commenter on matters before the Federal Communications Commission, and daily newspapers, including the *Wall Street Journal*, have published my opinion pieces. I have a weekly column in the business section of the *New York Sun*. I have testified on many occasions before committees of the U.S. Senate and House of Representatives. I received my undergraduate training at MIT, and I received a Ph.D. in economics from Stanford University. My curriculum vitae is attached as Appendix A.

*Professor Jerry Hausman*

I received an A.B. degree from Brown University and a B.Phil. and D. Phil. (Ph.D.) in Economics from Oxford University where I was a Marshall Scholar. My academic and research specialties are econometrics, the use of statistical models and techniques on economic data, and microeconomics, the study of consumer behavior and the behavior of firms. I teach a course in "Competition in Telecommunications" to graduate students in economics and business at MIT each year. I received the John Bates Clark Award of the American Economic Association for the most "significant contributions to economics" by an economist under forty years of age. I have received numerous other academic and economic society awards. My curriculum vitae is attached as Appendix B.

I have conducted significant academic research regarding the economics of the telecommunications industry. I have published a number of research papers in telecommunications. These papers include "Valuation and the Effect of Regulation on New Services in Telecommunications," *Brookings Papers on Economic Activity: Microeconomics*, 1997; "Economic Welfare and Telecommunications Welfare: The E-Rate Policy for Universal Service Subsidies," *Yale Journal on Regulation*, 16, 1999; "Competition in U.S. Telecommunications Services Four Years After the 1996 Act," in S. Peltzman and C. Winston, eds., *Deregulation of Network Industries* (2000); "Competition and Regulation for Internet-related Services: Results of Asymmetric Regulation", *Broadband*, Brookings, 2002; "Does Bell Company Entry into Long-Distance Telecommunications Benefit Consumers?," *Antitrust Law Journal*, 70, 2002; "Why do the Poor and the Less-Educated Pay More for Long-Distance Calls?," *Topics in*

*Economics Analysis and Policy* 2004; and “Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence from Five Countries,” forthcoming *Journal of Competitive Law and Economics*, 2005. I also wrote the chapter on Regulation for the *International Handbook of Telecommunications* (2003).

*B. Assignment*

We have been asked to provide an economic perspective on the FCC’s Order and Notice of Proposed Rulemaking released on January 31, 2005 as FCC 05-18 (the NPRM).<sup>1</sup>

*C. Summary of detailed findings*

The present NPRM raises many questions about whether the FCC should move against the direction of 30 years of price deregulation and instead impose new forms of price regulation on special access services. The NPRM raises many questions most of which can be placed in the following categories:

1. What are the markets for special access services;<sup>2</sup>
2. Are these markets competitive;<sup>3</sup>
3. Should the FCC continue to regulate the price of special access services;<sup>4</sup>
4. If so, should the FCC change its form of price regulation;<sup>5</sup>
5. Which indicia, including market conditions, should inform new rules?<sup>6</sup>

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<sup>1</sup> In the Matter of Special Access Rates for Price Cap Local Exchange Carriers (WC Docket No. 05-25) and AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services (RM-10593), *Order and Notice of Proposed Rulemaking*, January 31, 2005 (NPRM).

<sup>2</sup> See NPRM at paragraphs 82, 83, 85, 87-93, 120-121,

<sup>3</sup> See NPRM, particularly at paragraphs 76-80, 94-113, 122, 124-125,

<sup>4</sup> See NPRM at paragraphs 24.

<sup>5</sup> See NPRM, particularly at paragraphs 24, 44, 50-68, 72, 76-77, 80, 110-111, 123, 126-127, 135-145.

<sup>6</sup> See NPRM, particularly at paragraphs 29, 35-38, 40.

The NPRM raises concerns since it reaches a tentative conclusion to continue with price cap regulation<sup>7</sup> without a full discussion of whether any form of price regulation for special access services is necessary or whether alternative remedies may more effectively cure any potential problems in the markets for special access services.

Having concluded that price regulation is necessary for special access services without reasoned analysis, the NPRM then seeks information on the competitive conditions in markets for special access services. Even if the FCC were to find competition less than perfect in all markets for special access services, it does not rationally follow that price regulation should continue or be expanded. If the presence of less than perfect competition in one market necessarily led the government to impose price regulation in each related market, large portions of the American economy would have price regulation. The empirical observation, however, is that price regulation is the exception rather than the rule in the United States not because all markets are perfectly competitive but because price regulation is an extraordinarily invasive remedy often more harmful than the underlying malady. The government has more precise means to protect consumers from market power abuses.

For decades, the FCC has wisely relaxed price regulation of telecommunications services. We urge the FCC to exercise extreme caution in considering new forms of price regulation for special access services, but not because historical regulatory trends are infallible. Rather, we urge caution because the economic foundation for a rational basis for price regulation, that benefits are likely to exceed costs, is difficult to meet in a dynamically changing industry such as telecommunications.

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<sup>7</sup> NPRM at paragraph 24.

In this paper, we describe the conditions necessary for economically rational price regulation. We then review the conditions present for special access services and find that few, if any, of the requisite conditions for price regulation are met.

We reach the following conclusions.

- For the FCC to continue, much less expand, its rate regulation of special access services, the Commission should have a rational economic basis for such regulation. Price regulation cannot possibly be effective unless certain conditions are met. We find that special access services do not meet any, much less all, of the standard characteristics that economists would use to demonstrate a rational basis for price regulation. Indeed, distortions on investment and other harms are likely to outweigh any conceivable benefits from price regulation.
- Much of the BellSouth territory has substantial competition for special access services. Even in those areas with limited competition, the unprofitability of losing even a few customers in a large-fixed cost, small incremental cost market such as special access services means that ILECs have little incentive to raise prices. Further, non-discrimination regulation should be sufficient to protect customers from any plausible market power abuses.
- Price cap regulation, of the form that currently governs special access services, is economically more rational than rate-of-return regulation. Nonetheless, as discussed throughout this report, special access services do not lend themselves easily to price regulation, even price cap regulation. Services with heterogeneous technologies that are constantly changing and with geographic networks that are also constantly changing cannot rationally be regulated. The productivity offset

for a service with rapidly changing technology cannot rationally be calculated with any reasonable degree of accuracy.<sup>8</sup> Price caps for changes in technology or changes in competitive market conditions cannot defensibly be adjusted.

- The very nature of the questions the FCC raises in the NPRM illustrates the complexity, often unquantifiable, of special access markets, even for modifications of existing price cap regulation. New forms of price regulation along the lines implied in the FCC NPRM make little sense under these conditions.<sup>9</sup>

We organize our findings as follows:

- An economically rational basis is necessary for price regulation;
- The history of the price regulation of special access does not support its expansion;
- Special access services are heterogeneous, geographically specific, technologically evolving services offered jointly with other services on common facilities and facing rapidly changing demand;
- Conditions for effective price regulation are not present;
- Alternative instruments are available to remedy abuse of market power; and
- Efficient rate regulation does not support rate-of-return regulation.

Each of these findings is presented in its own section below.

## **II. An economically rational basis is necessary for price regulation**

The NPRM raises many questions related to the regulation of prices for special access services offered by price-cap ILECs particularly as related to Parts 61 and 69 of

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<sup>8</sup> NPRM, Para 35-37.

<sup>9</sup> See, e.g., NPRM, at Para 38, 40, 44, 50-58, 126, 127, 131, 135, and 145.



FCC rules. We begin with the premise that any form of price regulation adopted by the FCC should be economically rational: the economic welfare gains from such regulation should be predictably greater than the welfare losses.<sup>10</sup>

Industrial organization is the field of economics that most frequently addresses price regulation. Standard industrial organization text books of a generation ago described some of the potential harms of price regulation, the consequent distortions in investment decisions, and the lack of economic meaning to rate-of-return regulation for regulated monopolies.<sup>11</sup> Hausman (1997) and Hausman and Shelanski (1998) estimated the extremely large economic harm to consumer that arises from incorrect regulation—in the tens of billions of dollars per year.<sup>12</sup> More recent industrial organization textbooks sometimes omit price regulation as a topic altogether and instead focus on other forms of government intervention in markets lacking competition.<sup>13</sup>

Although a large segment of contemporary academic literature continues to address the economics of price regulation particularly in the context of pure monopoly, the decline of price regulation as a topic of academic interest is not a coincidence. The academic literature does not support the indiscriminate use of price regulation; the

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<sup>10</sup> The potential legal bases for price regulation by the FCC, such as Sections 201 and 205, use language of “just and reasonable” to apply to charges by common carriers. Any form of price regulation that is not economically rational may fail this standard. See Hausman and Shelanski (1998) and Hausman (2003) where an explicit basis of economic welfare is discussed as the economic basis for regulation. In both Australia and New Zealand, telecommunications regulation is now premised explicitly on improvements in the “Long Term Interests of End Users” (LTIE).

<sup>11</sup> See, e.g., F. Scherer, *Industrial Market Structure and Economic Performance*, (Chicago: Rand McNally), 1970, at 518-542.

<sup>12</sup> Hausman, Leonard, and Sidak (2002) do further estimates of consumer harm that arose from regulation of long distance.

<sup>13</sup> See, e.g., J. Tirole, *The Theory of Industrial Organization*, (Cambridge, MA: MIT Press), 1988, particularly at 3.

conditions for price regulation tend to be the exception rather than the rule.<sup>14</sup> There remains little economic foundation for rate-of-return regulation.<sup>15</sup> The academic economics literature provides some support for more economically rational forms of price regulation, such as price caps, but usually under the narrow circumstances of almost monopoly conditions with declining marginal costs.<sup>16</sup> As we shall see in this report, these conditions are not likely met in the provision of special access services. There is considerable skepticism in the economics profession that regulators effectively lower prices through price regulation.<sup>17</sup>

The harm to consumers from price regulation is a standard feature of many introductory economics lectures. Setting regulated prices too high leads to excess supply, distorted investments, but artificially fewer purchasers; setting prices too low leads to shortages and distorted investments. The frequent illustration of the harms of price regulation in introductory economics lectures is not surprising given the many unsuccessful examples of price regulation in the 20<sup>th</sup> century. Economists have often found more harm than good in the government's efforts to regulate prices whether in times of war (World War II), during national emergencies (oil embargoes of the 1970s), in the midst of inflation (early 1970s), or even to address the potential exercise of market power in highly regulated industries (transportation, insurance, finance, and public utilities). Over the past three decades, many industries once subject to price regulation in

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<sup>14</sup> D.W. Carlton and J.M. Perloff, *Modern Industrial Organization*, (Boston: Pearson Addison Wesley) 4<sup>th</sup> ed., 2005, This is the largest selling industrial organization text book. Only one of 20 chapters discusses any aspect of price regulation, at 686-735.

<sup>15</sup> *Ibid.*, at 707-714.

<sup>16</sup> *Ibid.*, at 700-704.

<sup>17</sup> *Ibid.*, at 705-706.

the United States no longer are. The substantial trend towards deregulation of prices has been repeated in most countries around the world.

The telecommunications industry is among those industries with substantially lessened price regulation, particularly under federal jurisdiction. Although the FCC appears to have retained much of the same legal authority it once had to regulate strictly interstate and international rates, it has progressively lessened price regulation, including price regulation for special access services. Indeed, it is difficult to find counterexamples where the FCC in the past 30 years has decided to introduce or expand price regulation to a telecommunications service. The same pattern of price deregulation has been repeated by telecommunications regulatory agencies in other countries.

The FCC's reduction of price regulation of special access telecommunications services has been a rational reaction to the absence of demonstrable benefits of such regulation relative to the costs of regulation.

### **III. The history of the price regulation of special access does not support its expansion.**

The NPRM provides a useful description of the history of the regulation of special access services.<sup>18</sup> The NPRM, however, does not fully emphasize six salient points:

- (1) Special access rate regulation began during a period of effective monopoly control of local access;
- (2) Market conditions have consistently evolved towards more competitive offerings of special access services;
- (3) Market conditions have consistently evolved towards more heterogeneous service offerings;

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<sup>18</sup> NPRM at paragraphs 9 - 18.

- (4) Over time, the FCC has applied consistently less regulation to special access services;
- (5) Nonetheless, price regulation of special access services remains complicated;
- (6) Price regulation of special access services has distorted investments and offerings by both incumbent carriers and competitive carriers;

*A. Special access rate regulation began during a period of effective monopoly control of local access*

Twenty-five years ago, the pricing of access by the interstate long-lines company of AT&T to its local company networks was a transfer price between different affiliates of the same parent company. Raising or lowering the access price might raise or lower the paper profitability of each affiliate, but not the overall profitability of AT&T.

After the divestiture of AT&T in 1983, the new AT&T was by far the largest buyer of interstate access services and the new Bell Operating Companies (BOCs) had effective monopolies on the provision of access to their networks. Rather than wait to see whether the effective bilateral monopolies of AT&T and the BOCs could have negotiated commercial agreements for access, the FCC wrote in 1983, and subsequently amended several times, the Part 69 rules for interstate and international access services, including special access services, to the local networks of BOCs and other incumbent local exchange carriers (ILECs) by interexchange carriers (IXCs) such as AT&T.<sup>19</sup> The charges for such access were subject to tariffs under Part 61 and to various non-discrimination provisions.<sup>20</sup> The original rate-of-return regulation for access was replaced with price cap regulation under Part 61 in the early 1990s, when there was some competition, and by pricing flexibility in 2002 when competition expanded further. IXCs

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<sup>19</sup> 47 CFR 69, 48 FR 10358, March 11, 1983.

<sup>20</sup> 47 CFR 61, 49 FR 40869, Oct. 18, 1984.

today have far more options for access to networks and customers than were available 20 years ago.

*B. Market conditions have consistently evolved towards more competitive offerings of special access services*

In the 1980s, special access was sold by one local company in a geographic area to a small number of IXC's including AT&T. Over time, more IXC's entered the market to compete for interstate and international services. By the early 1990s, competitive access providers such as Teleport and MFS operated in a few states and provided competitive access services to both businesses and IXC's. Competitive offerings of access services, including special access services, were limited by legal barriers in many states and local jurisdictions.

The Telecommunications Act of 1996 outlawed state and local prohibitions of entry into local telecommunications markets. Many firms in the late 1990s (including national companies such as AT&T, WorldCom, Global Crossing, Level-3, XO, Teligent, and Winstar, as well as dozens of smaller regional companies) invested substantially in building fiber rings and sophisticated data networks in metropolitan areas primarily to provide competitive special access services. Standard reference works, such as the New Paradigm Resources Group's *CLEC Report*, describe the networks of dozens of CLECs in various years.

At the time of each BOC's successful Section 271 application to the FCC to provide interLATA services in each state, facilities-based competitive services were provided to at least some business customers. The BOCs have received Section 271 approval in each state.

Under current price regulation, special access services have nearly become commodities with many web sites specializing in comparing prices for specific services by geographic location.<sup>21</sup> Potential end-user customers for special access services have many options for choosing a carrier: (1) the ILEC; (2) a facilities-based competitive provider of special access services such as AT&T, MCI, or Sprint;<sup>22</sup> (3) a reseller of special access services such as Megapath, Powernet Global, UCN, Network Innovations, and Netifice Communications. Web sites compare special access prices for services offered by all three types of carriers.

No carrier owns a point of presence in every geographic area in the United States, much less owns network facilities to reach every office building within each geographic area. Consequently, in order to provide special access services almost anywhere in the country, carriers use combinations of their own data network facilities and facilities leased from other carriers, including both ILECs and CLECs, either through special access tariffs, unbundled network element leases, or commercial contracts. Without controlling the access facilities to all potential customers, it is impossible for one carrier, ILEC or CLEC, to control special access service rates for all customers. Each carrier is dependent on other carriers in the network.

No definitive source of information provides a comprehensive list of special access service providers in each metropolitan area today. Publicly available compilations of CLECs by metropolitan areas suggest facilities-based competitive networks in 2004

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<sup>21</sup> See, e.g., [www.shopforframerelay.com](http://www.shopforframerelay.com); [www.shopfords3.com](http://www.shopfords3.com); [www.t1forbusiness.com](http://www.t1forbusiness.com); [www.bmgcommunications.net](http://www.bmgcommunications.net); [www.bandwidthmarket.com](http://www.bandwidthmarket.com); [www.broadbandlocators.com](http://www.broadbandlocators.com); [www.broadband.com](http://www.broadband.com), and many others.

<sup>22</sup> Table 1 below lists competitive facilities-based providers in three cities.

were offering services to business customers in practically every major metropolitan area.<sup>23</sup>

Our own research finds substantial entry, exit, and consolidation among competitive special access providers providing fiber networks in metropolitan areas. We gathered data on a sample of three metropolitan statistical areas (MSAs) in the BellSouth region: Miami (MSA rank 6); Columbia, SC (MSA rank 73); and Savannah, GA (MSA rank 149). Table 1 displays two columns for each of these MSAs. In the first column are the CLECs providing all forms of facilities-based services as reported in the UNE Fact Report as of October 2004 in each MSA.<sup>24</sup> The second column presents the CLECs whose web sites suggest that are providing facilities-based special access services in each MSA.

In addition, AT&T, MCI, and Sprint each offer special access services throughout the United States, but those services may be based on leased facilities in some markets. Table 1 does not include cable companies, many of which offer cable modem services to business customers,<sup>25</sup> nor does Table 1 include other ILECs that offer special access services within an MSA. For example, Alltel serves some of the suburbs of Columbia, South Carolina with special access services.

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<sup>23</sup> See, e.g., P. W. Huber, E. T. Leo, "UNE Fact Report 2004," submitted in WC Docket No. 04-313 and CC Docket No. 01-338, Appendix D, October 2004.

<sup>24</sup> Ibid., Appendix D.

<sup>25</sup> See, e.g., [www.comcast.net/smallbusiness.asp](http://www.comcast.net/smallbusiness.asp); [www.rrbiz.com](http://www.rrbiz.com); [www.cox.com](http://www.cox.com).

Table 1

CLECs Potentially Offering Facilities-Based Special Access Services  
Over Fiber Networks in Three Metropolitan Statistical Areas

	CLECs reported in UNE Fact Report, Appendix D, October 2004	Companies with Web Sites indicating facilities-based Special Access Services in May 2005.
Miami, FL (MSA Rank = 6)	Allegiance Telecom AT&T Eagle Communications Florida Digital Network ITC DeltaCom MCI Mpower NuVox PaeTec SBC Telecom USLEC XO  Total = 12	AT&T  Florida Digital Network ITC DeltaCom MCI  NuVox PaeTec SBC Telecom  XO Broadwing Global Crossing IDT Corporation Level 3 Communications Qwest Communications WilTel Communications Group, Inc. Xspedius Management Company  Total = 15
Columbia, SC (MSA Rank = 73)	Birch Telecom ITC DeltaCom KMC Telecom NewSouth NuVox Time Warner Telecom  Total = 6	ITC DeltaCom KMC Telecom  NuVox Time Warner Telecom SCANA Xpedius  Total = 6
Savannah, GA (MSA Rank = 149)	ITC DeltaCom KMC Telecom NewSouth  Total = 3	ITC DeltaCom KMC Telecom NuVox Communications U.S. Carrier Telecom  Total = 4

Note: AT&T, MCI, and Sprint websites indicate nationwide availability of special access services.  
 Sources: "UNE Fact Report," company web sites, Yahoo Yellow Pages, Verizon Super Pages.



Table 1 indicates several characteristics of the availability of special access services from facilities-based providers. First, in markets of all sizes, CLECs offer facilities-based special access services, although the exact number of providers is difficult to determine.<sup>26</sup> Second, consolidation within the CLEC industry, such as between NuVox and NewSouth, may change the number of CLECs in a geographical area, but not necessarily the available facilities for special access services. Third, CLECs offering special access services still have substantial entry and exit into specific geographic markets. Fourth, larger markets tend to have more CLECs offering special access services. Finally, the firms listed in Table 1 offer special access services during the period of pricing flexibility, which is available to BellSouth in each MSA listed in Table 1. Pricing flexibility has clearly not caused all CLECs to exit the market for special access services.

ILECs also face competition for special access services from wireless service providers. National wireless carriers offer mobile data services that potentially compete with demand for fiber-based special access services.<sup>27</sup> Clearwire and other fixed wireless carriers offer wireless Internet access directly to businesses and consumers.<sup>28</sup> Several cities including Philadelphia are considering developing municipally-owned fixed wireless services that would effectively bypass some special access services offered by ILECs. First Avenue Networks<sup>29</sup> and IDT<sup>30</sup> offer fixed wireless services, particularly

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<sup>26</sup> In preparing the table, we attempted to err on the side of caution and included only those firms that unambiguously indicated both facilities and special access service offering in an MSA. Some firms were excluded from the table because of ambiguity about either facilities or offerings in an MSA.

<sup>27</sup> Verizon wireless, for example, offers Verizon Wireless BroadbandAccess. "This ultra-high-speed wireless service available in various cities throughout the U.S. only from Verizon Wireless, provides users with typical speeds of 400-700 kbps, capable of bursts up to 2 Mbps." See [http://www.verizonwireless.com/b2c/dispatcher?action=DISPLAY&item=\\_FAQ\\_TOPIC&topicID=209](http://www.verizonwireless.com/b2c/dispatcher?action=DISPLAY&item=_FAQ_TOPIC&topicID=209)

<sup>28</sup> See, e.g., [www.clearwire.com](http://www.clearwire.com).

<sup>29</sup> See <http://www.firstavenet.com/fixedwireless.htm>.

dedicated transportation services, which compete directly with wireline special access services.

Market conditions have changed substantially for special access services since the access charge regulations were conceived in 1983 and even since pricing flexibility was made available to ILECs in 1999. Publicly available information does not indicate precisely the degree of competition for each special access service in every conceivable geographic market today. On the other hand, publicly available information reveals substantial competitive special access service offerings in every major metropolitan area. Price regulation is premised on the absence of competitive alternatives. While that condition held for special access in 1983, it no longer holds today.

*C. Market conditions have consistently evolved towards more heterogeneous service offerings*

In 1983, access for long-distance companies was primarily for interstate switched voice access. Over time, access has migrated from switched to special and from voice to data. This evolution is reflected in data cited in the NPRM.<sup>31</sup> But “special access” is not a homogeneous service. The FCC divides special access into terminations between an end user and a wire center, and between a wire center and the point of presence of an IXC.<sup>32</sup> Moreover, each link of special access is not a homogeneous service. Each can vary by capacity, speed, transmission technology, reliability, and other factors.

The heterogeneity of special access offerings, both those of an ILEC and of CLECs in a region, complicates the administration of a price regulatory structure. It is

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<sup>30</sup> See <http://www.idt.net/about/press/story.aspx?id=6010>.

<sup>31</sup> NPRM, at para. 3.

<sup>32</sup> 47 CFR, Part 69.703.

difficult enough to administer a price regulation for a single homogeneous service; it is far more difficult when the service has many different and changing characteristics.

*D. Over time, the FCC has applied consistently less regulation to special access services.*

In response to the expanding competition for the provision of telecommunications services, the FCC in 1997 began to revise the system of access charges under Docket 96-262.<sup>33</sup> By August 1999, the FCC granted some flexibility for the pricing of special access services to ILECs under Subpart H of the Part 69 Rules.<sup>34</sup> The FCC specifically noted the expanded presence of competitive providers of special access.

Under Chairman Kennard and Chairman Powell, no commissioner dissented from an FCC order because of a fear that deregulation of special access services would harm competition. Indeed, the only dissent was that the remaining rules on special access rate regulation were too complex, administratively burdensome, and unreflective of actual cost structures.<sup>35</sup> In 2000, the FCC further modified its rules for special access charges as part of the CALLS proceeding.<sup>36</sup>

*E. Nonetheless, price regulation of special access services remains complicated*

Despite the general trend towards deregulation of special access services, various forms of regulation, particularly price regulation, remain in place. The range of available prices for special access services that a large private customer or CLEC or IXC may

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<sup>33</sup> See, e.g., Access Reform First Report and Order, 12 FCC Rcd at 15985, 16094.

<sup>34</sup> *Access Charge Reform*, CC Docket Nos. 96-262, 94-1, 98-63, 98-157, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, 14224-25, 14232-33, 14234-35, 14257-310, paras. 1-4, 19, 24-26, 67-175 (1999) (*Pricing Flexibility Order*),

<sup>35</sup> FCC, Separate Statement of Comm. Harold Furchtgott-Roth, Approving in Part, Concurring in part, and Dissenting in Part, August 27, 1999.

<sup>36</sup> See *Access Charge Reform*, CC Docket Nos. 96-262, 94-1, 99-249, 96-45, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd 12962 (2000) (*CALLS Order*). See also separate statement of Comm. Harold Furchtgott-Roth dissenting in part with respect to process and other matters.

obtain depend not only on the vast array of technological choices but on variations in regulatory conditions as well. These regulatory conditions include the following:

1. Availability of rate-of-return regulation for small rate-of-return carriers;<sup>37</sup>
2. Special access tariffs posted at the FCC, often with discounts depending on volume and term;<sup>38</sup>
3. The structure of price caps for price cap carriers that do not qualify for any pricing flexibility;<sup>39</sup>
4. The availability of either Phase I or Phase II pricing flexibility for dedicated transport from POPs to wire centers per pricing flexibility order;<sup>40</sup>
5. The availability of either Phase I or Phase II pricing flexibility for channel termination from wire center to customer premises per pricing flexibility order;<sup>41</sup>
6. Availability of potentially substitutable UNE dedicated transport;<sup>42</sup>
7. Availability of potentially substitutable UNE high-capacity loops;<sup>43</sup>
8. Non-discrimination provisions;<sup>44</sup>
9. Potentially available contract tariff rates;<sup>45</sup>
10. Potentially applicable Section 271 and 272 requirements;<sup>46</sup>
11. Potential merger-specific conditions.<sup>47</sup>

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<sup>37</sup> Small carriers may elect rate-of-return regulation, and with rate-of-return on special access services.

<sup>38</sup> See, e.g., BellSouth Tariff 1, Section 2.

<sup>39</sup> The exact structure of price caps for special access services can vary from carrier to carrier. See 47 CFR, Parts 61 and 69.

<sup>40</sup> 47 CFR, Part 69.

<sup>41</sup> Ibid.

<sup>42</sup> High-capacity dedicated transport is widely available as unbundled network elements. See FCC, Unbundled Access to Network Elements, WC Docket No. 04-313, CC Docket No. 01-338, Order on Remand, February 4, 2005, paragraphs 66-145.

<sup>43</sup> High-capacity loops are widely available as unbundled network elements. Ibid., paragraphs 146-198.

<sup>44</sup> E.g., 47 U.S.C., sections 202, 252, and 272.

<sup>45</sup> See discussion in Section V.B. below.

<sup>46</sup> See, e.g., FCC, File No. EB-04-MD-010, Memorandum Opinion and Order, December 9, 2004.

12. Availability of competing sources of special access services from CLECs or internally provided by the potential customer.<sup>48</sup>

The interactions of these factors are complex, and these factors are likely to vary across geographic markets. For example, the pricing flexibility rules alone lead to at least six different regulatory conditions for BellSouth in its study areas: (1) study areas with no pricing flexibility; (2) study areas with Phase II flexibility for both dedicated transportation and channel terminations; (3) study areas with Phase I flexibility for both dedicated transportation and channel terminations; (4) study areas with Phase II flexibility for dedicated transportation and Phase I flexibility for channel terminations; (5) study areas with Phase I flexibility for dedicated transportation only; and (6) study areas with Phase II flexibility for dedicated transportation only. Appendix C illustrates the state of BellSouth pricing flexibility in each of its study areas.

The complexity of the current structure of special access service rate regulation unnecessarily complicates the administrative responsibilities of the FCC. The FCC dedicates valuable staff time to administering and enforcing this complex web of rules that vary by carrier and geographic region. The complexity of regulation also makes it difficult for the FCC to evaluate the effect of small changes to the structure of special access rate regulation. Well-intended tweaks to the structure of price regulation may likely do little more than add to complexity.

CLECs and IXC's do not necessarily benefit from the complexity of rate regulation either. Whether purchasing special access services from a regulated ILEC or

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<sup>47</sup> For merger-specific conditions that may affect special access services, consider obligations for shared transport under the SBC-Ameritech merger recently litigated before the U.S. Court of Appeals for the District of Columbia, *SBC v. FCC*, No. 03-1147, released May 13, 2005.

<sup>48</sup> See subsection B above.

offering special access services in competition with an ILEC, a CLEC or IXC may incur higher transaction costs to decipher a complex array of ILEC special access service rates that vary as a result of different forms of rate regulation. These higher transactions costs may discourage competitive entry or expansion of service. Moreover, as can be seen from the results of Subsection F below, complex rate regulation increases the likelihood of distortion of investment decisions by both CLECs and ILECs. In turn, ILECs incur much higher administrative and transactions costs as a result of the complexity of special access service rate regulation.

*F. Price regulation of special access services distorts investments and offerings by both incumbent and competitive carriers*

Both incumbent and competitive carriers offer special access services to customers both with their own facilities and with the facilities leased both from incumbents and from other competitive carriers. For each part of a carrier's network, it must make decisions about whether to invest or lease transport facilities throughout the network and termination facilities at the customer premises (office buildings). The carriers must also make decisions about specific technologies to invest in or lease for each part of its network.

These invest/lease decisions are influenced by prices, both regulated and unregulated, available to the carriers. Competitive carriers have many alternative means of offering special access services to customers: use of own network facilities; leasing special access services from an ILEC under Parts 61 and 69 of FCC rules; leasing special access services from another CLEC; combining owned facilities at a customer premises and owned facilities with POP facilities with the transportation facilities or high-capacity loops leased from an ILEC under Section 251 UNE provisions; commercial lease

arrangement with an ILEC; and other provisions of law such as Section 271 or merger agreements that may affect CLECs and ILECs on a case-by-case basis.<sup>49</sup> As in all markets, purchasers will gravitate to the least costly alternatives, whether those are the regulated prices or not.

*1. Distortions from rate-of-return regulation*

The investment distortions from rate-of-return regulation have been well-known since the 1960s.<sup>50</sup> Special access services were entirely governed by rate-of-return regulation from 1983 through 1991, and many small telecommunications carriers continue to elect rate-of-return regulation for special access services. Under rate-of-return regulation, the government places itself in the position of guaranteeing the profitability of a regulated firm based on the rate-of-return on its investments. To increase profits, the regulated firm has no incentives to cut costs, and indeed has every incentive to expand investments. The entire pricing scheme is sustainable only if demand for the product or service is relatively inelastic and only if competition is precluded. Relatively elastic demand will limit the regulator's ability to pass along higher costs to customers, and competition will drive prices below the rates necessary to sustain rate-of-return price regulation. Economists generally agree that rate-of-return regulation should almost never be used in a situation where competition exists; see, e.g., Hausman (2003) for a discussion of the problems that arise. In particular, rate-of-return regulation has been demonstrated to retard investment in new technologies by the regulated companies, to lead to productive inefficiency (failure of cost minimization) and thus higher prices to consumers, and to severely distort competition between the regulated service provider

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<sup>49</sup> See fn 37 supra.

<sup>50</sup> Carlton and Perloff, at 707-714.

and its unregulated competitors. Hausman (2003) stated: “The battle to banish cost based regulation appeared to be largely over.” It would be a remarkable development for the FCC to return to such an economically discredited and harmful form of regulation after rate-of-return regulation had largely been replaced by more advanced forms of price cap regulation.

2. *Distortions from inflexible price caps without pricing flexibility*

The “inflexible price-cap” rate regulation implemented by the FCC in 1991 removes many of the worst investment distortions of rate-of-return regulation. (We refer to the FCC’s price cap regulation as “inflexible price caps” to distinguish it from the usual usage of “price caps” by regulatory economists. Most economists associate “price caps” with a form of rate regulation where a firm can set any price structure as long as it is less than the price cap subject to setting the price above incremental cost. Until the 1999 pricing flexibility order, such downward pricing flexibility was prohibited by the FCC. Economists associate substantial welfare loss with government prohibitions on mutually beneficial transactions.)

Under the FCC’s inflexible price cap regulations, permitted rates for special access services decline over time with assumed productivity improvements. Carriers have incentives to reduce costs and seek efficiencies. Although more efficient than rate-of-return regulation, inflexible price cap regulation still presumes an absence of competition. In the presence of competition, inflexible price cap regulation can distort investment and utilization decisions both for incumbent and competitive carriers. To the extent regulated prices necessarily will deviate from efficient prices, sometimes too high or too low, Table 2 summarizes the likely distortionary effects on investments



and network utilization with inflexible price cap regulation. Table 2 does not address the effects of transactions costs and uncertainty.

Table 2  
ILEC and CLEC reactions to  
Inflexible Price Cap Regulation of Special Access Services  
(Without consideration of transaction costs and uncertainty)

	<i>ILEC incentive</i>	<i>CLEC incentive</i>	<i>Effect on ILEC network</i>
Regulated lease price above self-provisioning cost	ILEC will build network facility, but will have few competitive lease arrangements; under-utilization of facilities	CLEC will self-provision Or lease from other CLEC	under-utilization of network
Regulated lease price below self-provisioning cost	ILEC will not invest further in that portion of network; indeed, it may seek to lease from CLEC with network facility	CLEC will lease from ILEC; Facilities-based competitive entry is discouraged	Under-investment; Over utilization of network
Regulated lease price equals self-provisioning cost; or no binding price regulation	Indifferent	Indifferent	Efficient outcome

### 3. *Distortions from price caps with pricing flexibility*

Phase I pricing flexibility allows incumbent carriers to reduce rates below the inflexible caps and engage in contract tariffs with customers. Phase II pricing flexibility removes most forms of price regulation except posting of tariffs. Because both Phase I

and Phase II pricing flexibility are triggered by the presence of competitors at least in some wire centers, investment decisions for both incumbent and competitive carriers under pricing flexibility begin to approximate those under competitive conditions.

Even under Phase II pricing flexibility, the range of pricing options available to ILECs is not unlimited. Carriers are still bound by non-discrimination provisions, tariffing requirements, and requirements associated with any relevant Section 271 and merger agreements.

4. *Distortions from transactions costs and uncertainty associated with pricing regulation*

Even with pricing flexibility, investment and other decisions by both incumbent and competitive carriers are further distorted by the substantial regulatory uncertainty and transactions costs in the regulated telecommunications industry. The transactions costs of complying with FCC and other rules, and simply participating in proceedings such as the present one, are borne by all telecommunications carriers. These costs reduce the overall profits and expectations of profits in industry, thereby discouraging investment.

Uncertainty about telecommunications regulation generally, and regulation that applies to special access services in particular, discourages investment in these services. FCC rules for the pricing of special access services, for the availability and pricing of unbundled network elements related to special access, and for other matters pertaining to special access services have changed substantially in recent years, and are likely to change in the coming years. Actual changes in regulations, and even the prospect of changes that never materialize, create uncertainty about the regulatory environment that will apply to investments in plant and equipment that have potentially long economic lives. Hausman (1997, 1998, 2003) analyzes the effect of increased uncertainty on fixed

cost investment and finds that the “hurdle rate” increases substantially when uncertainty increases.<sup>51</sup> The evaluation of such investments, by both incumbent and competitive carriers, is negatively influenced by the frequent changes in regulatory environment.

The current system of regulating special access service rates with periodic FCC reviews perpetuates the uncertainty about the regulation of these charges. Any effort to expand the current system of special access rate regulation would lead to many more FCC decisions subject to judicial review and periodic FCC review. Such an expansion of regulation would only exacerbate regulatory uncertainty. In contrast, a decision by the FCC not to price regulate special access would greatly decrease this uncertainty by decreasing regulatory risk. Investments by both CLECs and ILECs would not be distorted by the uncertainty of future regulatory changes.

**IV. Special access services are heterogeneous, geographically specific, technologically evolving services offered jointly with other services on common facilities and facing rapidly changing demand**

The FCC asks several questions with respect to market definitions for special access services.<sup>52</sup> The market definitions for special access services are not easily made.

*A. Supply of special access services*

Throughout the NPRM, the FCC asks many questions related to the cost structure of providing special access services.<sup>53</sup> Yet, as the FCC has long recognized, to quantify precisely the costs of special access services is conceptually challenging, if not impossible, for many reasons.

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<sup>51</sup> As uncertainty increases, economic incentives cause fixed cost investments to be postponed while the uncertainty is resolved. Thus, the hurdle rate increases at a given point in time when uncertainty increases.

<sup>52</sup> See, e.g., NPRM, at 82, 83, 85, 87-93, and 120.

<sup>53</sup> See, e.g., NPRM at 35-37, 50-68, 78-80, and 90-102.

First, network facilities for special access services are shared for other services as well; allocations of costs between these different uses are inherently arbitrary. In 2001, the FCC froze the separations allocations between interstate and intrastate access services because of the inadequacy of available information to provide a more rational basis for allocation.<sup>54</sup> Determining a rational base for special access services costs must first overcome the problem of allocating common network costs across several different uses.

Second, even if the common costs could be allocated in such a way to isolate the network costs of special access services, most network costs are fixed and require complex assumptions to assign a portion of these fixed costs to specific incremental services. These assumptions include the economic depreciation of capital, the costs of operating and maintaining the network, and the cost of capital for the operating company.<sup>55</sup>

Third, further complicating the factors mentioned in the preceding two paragraphs, special access services have undergone both rapid technological change and introduction of new services in recent years. All indications suggest continued rapid technological change making rational allocations among different services on the same network all the more complicated and rational assignment of fixed costs to incremental services more implausible.

To provide a rational basis for price regulation of special access services, the FCC must have accurate measures of the costs of providing such services as well as expected cost changes over the economic lifetimes of the capital stock. We do not believe that

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<sup>54</sup> FCC *Report and Order*, Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, May 22, 2001.

<sup>55</sup> With decreasing costs of input factors to provide special access services, Hausman (2003) demonstrates that calculation of economic depreciation is far more complicated than current FCC procedures allow for.

such measures are readily available either from information presently available to the FCC or from existing empirical research on special access services. We are skeptical of the efficacy of efforts to collect such information and of the proper interpretations of such analyses should they be conducted.

Finally, even if the FCC had an accurate empirical cost study for special access services at one point in time, the study would likely soon be obsolete. Technological change in the telecommunications industry is rapid, and nowhere is that change more pronounced than in business broadband services that rely on special access.<sup>56</sup> Appendix D lists the 47 changes to the BellSouth special access tariff since the introduction of pricing flexibility in August 1999, or slightly less frequently than one per month. Most of the changes reflect a new technology feature available to BellSouth customers.

Hausman (1997, 1998, and 2003) analyzes the large effect that economic depreciation, a factor highly affected by technological obsolescence, can have on investment and pricing decisions. He also demonstrates how incorrect regulatory depreciations have extremely large distortionary effects on fixed cost investments. A cost study of special access from just a few years ago could not be a reliable basis for the cost of special access today. One could not rationally expect a cost study of special access today to have much longevity especially given the very large changes in economic depreciation.

*B. Demand for special access services*

Not only will it be difficult for the FCC to measure accurately the cost of special access services, the FCC will be hampered by the absence of economically defensible

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<sup>56</sup> As an example of technological change and uncertainty we note that WiMax supporters claim it will provide 40 Mbps service by 2006. See <http://www.wimaxforum.org/about>.

boundaries for the demand for special access services. Economists have clear empirical techniques based on own and cross-price elasticities of demand to determine which services are in the same market and which are not. We are not aware that such comprehensive demand studies for special access services throughout the United States have been conducted.

Under the pricing flexibility order, the FCC examines special access services on a study area basis, implicitly holding that a study area is a relevant geographic market. For dedicated transport of DS-1 (1.544 Mbps) and DS-3 (44.736 Mbps) equivalent fiber on an unbundled network element basis, the FCC looks at pairs of wire centers, implicitly holding that the links between wire centers are the relevant geographic market for dedicated transport.<sup>57</sup> High capacity loop unbundling for DS-1 and DS-3 is based on information from individual wire centers.<sup>58</sup> Some observers may argue that the geographic markets for special access services should be more granular still, potentially reflecting different options available in different buildings, even differences between two adjacent buildings. Without empirical evidence that the FCC has not collected to test for relevant geographic markets, the FCC cannot reach a reasoned conclusion about the appropriate geographic market for special access services.

Nor can the FCC easily reach a conclusion about the proper service market for special access services. Part 69 rules distinguish between dedicated transport between wire centers and channel terminations. Are DS-1 and DS-3 loops in the same service market? The Unbundled Network Elements Order provides different rules for DS-1 and

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<sup>57</sup> See FCC 04-290, In the Matter of Unbundled Access to Network Elements, *Order on Remand*, Released February 4, 2005.

<sup>58</sup> *Ibid.*

DS-3 both for high-capacity transport and high-capacity loops.<sup>59</sup> The range of technologies is far greater than just these two relatively low-capacity standards. Common measures include OC-n (ranging from 150 Mbps to several Gbps).

We do not believe that the FCC has available to it comprehensive demand studies for special access services to determine the extent of product and geographic markets. Such studies would be necessary for the FCC to have a rational basis for price regulation of special access services.

Even if such studies were available to the FCC, the FCC would face administrative difficulties in defining markets for special access services in such a way as to permit rational rate regulation. First, the demand conditions for each of the special access services would likely change over time requiring constant updating. Second, to the extent demand for special access services is based on narrow service definitions and small geographic areas, the FCC would face a large number of markets in which to impose price regulation. The FCC would rationally have to monitor competitive conditions in each of these markets. Administratively, all of this monitoring would be costly for the FCC. In addition to the administrative expense, the FCC will have great difficulty obtaining defensible measures of demand for special access services undergoing rapid technological change.

#### **V. Conditions for price regulation are not present**

Even if the FCC were to have defensible empirical measures of market boundaries for all of the components of special access services, it does not necessarily follow that any, much less all, of these markets would have conditions necessary for price regulation. These conditions include:

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<sup>59</sup> Ibid.

1. Near monopoly with little or no chance of competitive entry
2. Opportunity to exercise significant market power
3. Failure of contracts
4. Failure of other government remedies
5. Predictable regulatory environment

None of these conditions holds throughout the United States, and none of these may hold for any particular special access service in any geographic market.

A. *Near monopoly conditions do not exist*

Over the past 10 years, dozens of firms have entered special access markets to offer services in competition with ILECs.<sup>60</sup> This competitive entry occurred without rate-of-return regulation imposed on ILECs, and without inflexible price caps since 2001. CLEC entry has been both with owned facilities and with leased facilities either through special access tariffs or unbundled network elements. Although many CLECs have failed for many reasons, CLECs remain viable in practically all geographic markets for the provision of special access services. As shown in Table 1, many CLECs offer facilities-based special access services even in MSAs with pricing flexibility. Special access services consequently do not appear to be natural monopolies in which only one firm can survive. Indeed, many firms survive to offer services without additional price regulation.

CLECs offer special access services for practically any technology in many areas of the country. There are no legal barriers to entry by either technology or geography. Additional entry is possible. It would be difficult to define a particular product and geographic market for special access services in the United States without actual competition or the threat of competitive entry.

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<sup>60</sup> See UNE Fact Report 2004; *CLEC Report*, various years; FCC, RM No. 10593, Declaration of A.E. Kahn and W.E. Taylor, Nov. 27, 2002.



*B. No clear evidence of opportunity to exercise significant market power*

Even if markets for special access services were well defined, and even if there were near monopoly conditions with little or no opportunity for entry in some of those markets, it still would not necessarily follow that the ILEC in each of those markets could exercise significant market power.<sup>61</sup> Evidence from the geographic areas in which BellSouth has obtained pricing flexibility indicates that CLECs continue to offer services. Opportunities to raise prices profitably depend on both demand for services and the cost of supplying services in a market. The costs for an ILEC of providing broadband special access services are largely fixed costs; marginal costs are only a small component. Hausman (2002, 2003) illustrates that these circumstances would leave an ILEC unable to exercise market power if demand is even moderately sensitive to price.<sup>62</sup>

Because competition takes place at the margin, only a small proportion of the ILEC's customers need to defect to defeat its attempted price increase. Suppose that an ILEC attempted to increase prices on special access by five percent. How much traffic would that ILEC need to lose before the increase would be unprofitable? The formula to calculate that "critical share" is:

$$(1 - MC/P) Q_1 < (1.05 - MC/P) Q_2.$$

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<sup>61</sup> By significant market power we mean the ability to price above the competitive level for a non-transitory period of time.

<sup>62</sup> J. Hausman, "From 2G to 3G: Wireless Competition for Internet-Related Services," in *Broadband: Should We Regulate High-Speed Internet Access?*, (R.W. Crandall and J. H. Alleman, eds), (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies), 2002, at 126-127 and J. Hausman, "Regulated Costs and Prices in Telecommunications," in G. Madden ed. *International Handbook of Telecommunications*, 2003.

where  $Q_1$  is demand before the attempted price increase,  $Q_2$  is demand after the attempted price increase,  $MC$  is marginal cost, and  $P$  is price. An important empirical fact for special access is that fixed costs are a very large component of the overall cost, so that marginal cost is a relatively small component. Assume, for example, that the ratio of marginal cost to price,  $MC/P$ , is 0.2.<sup>63</sup> Then  $Q_2$  would be  $0.94Q_1$ , so that the critical share is six percent. Thus, if the ILEC were to attempt to raise its price by five percent, and if, as a result, it were to lose more than six percent of its traffic, the attempted price increase would be unprofitable and thus unilaterally rescinded. As we explain below, given this very small critical share and the presence of non-discrimination provisions in FCC regulations, the presence of a relative small amount of competition in a market leads to the conclusion that regulation is unnecessary where this competition exists.

Efforts to raise special access service rates are also constrained in most markets by the availability of price-regulated unbundled network elements for high capacity loops and dedicated transport.<sup>64</sup> In those markets where these unbundled networks elements are not available because of the presence of competitors, those competitors constrain the ability of the ILEC to raise prices so that price regulation is unnecessary.

*C. No evidence of failure of contracts*

Many CLECs do not rely on regulated tariffs for special access services but instead have commercial contracts with ILECs. Contracts are mutually beneficial. There presumably should be some evidence that these contracts have failed as evidence that rate regulation is necessary.

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<sup>63</sup> This assumption is likely to be “conservative” and with a lower ratio the critical share becomes smaller.

<sup>64</sup> See FCC, Unbundled Access to Network Elements, WC Docket No. 04-313, CC Docket No. 01-338, Order on Remand, February 4, 2005.

With pricing flexibility under either Phase I or Phase II, ILECs may enter into contract tariffs with customers. Appendix E lists 19 different contract tariffs for special access services that BellSouth has filed with the FCC since obtaining pricing flexibility. The presence of these contract tariffs, negotiated with CLECs and IXCs, is evidence contradicting any alleged failure of contracts as a means to benefit both ILECs and CLECs for the provision of special access services.

Further many if not most BellSouth customers pay less than the listed tariff rates through the volume discount savings plans provided in Section 2 of BellSouth's Tariff 1. The current Savings Plan for Special and Switched Access is called the BellSouth Transport Advantage Plan (TAP). With the BellSouth TAP, a customer receives credits to his bill associated with a commitment to maintain an amount of recurring billing (this commitment amount is determined by the customer). The BellSouth TAP was introduced on March 31, 2005 in Transmittal No 882.<sup>65</sup>

*D. No failure of other government remedies*

Individual CLECs and individual ILECs have many commercial, legal, and regulatory disputes. The remedies for these disputes depend on the individual circumstances at issue. Some of these remedies are reviewed in Section VI, which follows. Generalized imposition of price regulation may do little to address the root causes of many of these disputes.

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<sup>65</sup> The introduction of the BellSouth TAP was the result of an FCC Order that resulted from a complaint against a couple of other BellSouth Savings Plans, i.e., the BellSouth Transport Savings Plan and the BellSouth Premium Service Incentive Plan.

*E. Expanded regulation of special access services does not lead to predictable regulatory environment*

If ILECs were natural monopolies for the provisions of special access services, the many investors in CLECs that offer special access services were irrational from the beginning in ever investing in those CLECs; they were doomed to failure. Economists typically do not assume that investors are irrational. Many CLECs have failed for many reasons, but natural monopoly power of ILECs in the offering of special access services is not likely among them.

More plausible explanations for CLEC failure are reasons other than natural monopoly. Some of these are the natural failure of some new entrants in any market. Another reason is that regulatory uncertainty, particularly federal regulatory uncertainty, harmed investments.

The regulatory environment in 1996 was far different from the regulatory environment in 2000 which is far different from the regulatory environment today. Investors at any point in time can examine current and past regulation, but cannot foresee future regulation. Many FCC rules have not withstood court review. Given the fixed cost nature of much of the telecommunications investment, rapidly changing regulatory and technology environments have made much telecommunications investment uneconomic.

The imposition of expanded price regulation is a risky scheme that may benefit no one and could harm many. The longevity of most federal telecommunications rules is unpredictable either because the FCC may change its mind or because the courts may vacate or remand the rules. Without a clear legal foundation, expanded price regulation of special access services will be particularly vulnerable to court reversal.

## **VI. Alternative instruments are available to remedy abuse of market power**

Even if it were the case that some ILECs exercise market power in some special access markets, it does not follow that price regulation is the appropriate remedy.

Through antitrust and other laws, other means exist to protect consumers and businesses from the unfair use of market power. These include consumer protection laws, antitrust laws, and various laws to protect against unfair trade practices. The Antitrust Division of the Justice Department and the Federal Trade Commission review hundreds of cases annually; systematic price regulation is rarely the result. Price regulation is an extreme form of government intervention best reserved for only when other forms of intervention are inadequate.

The Communications Act of 1934 and the Telecommunications Act of 1996 provide many mechanisms other than price regulation to promote competition in telecommunications services including special access services. These include interconnection and other obligations under Section 251, commercial negotiations and arbitration under Section 252, and removal of barriers to entry under Section 253.

Where the Communications Act of 1934 limits the types of terms and conditions that a common carrier may offer—e.g., Sections 202, 251, and 252—the statute specifically prohibits discrimination but does not require the setting of a specific price. For all of the many legal remedies available to protect consumers and business interests from market misconduct, price regulation is rarely if ever required.

The FCC has enforceable rules which limit the potential range of pricing of access services but which do not require rigid price regulation. Thus, the FCC has enforced

limitations on pricing of access services through merger conditions,<sup>66</sup> Section 271 non-discrimination provisions,<sup>67</sup> and Section 272 non-discrimination provisions.<sup>68</sup> The FCC has even enforced under Section 201 the “reasonableness” of access rates for carriers not covered by price regulation.<sup>69</sup> With all of these powers outside of the realm of Part 61 and 69, the FCC has no need to expand the scope or the depth of its pricing regulations. Indeed, economists recognize that the prohibition on price discrimination for wholesale services alone may lessen or even eliminate any need for rate regulation.<sup>70</sup>

Any effort by an ILEC to raise rates for customers facing less competition within a study area would be defeated by the non-discrimination provision and loss of revenue.<sup>71</sup> As we demonstrated above, only a very small loss of demand by an ILEC will cause an attempted price increase above competitive levels to be unprofitable given the low marginal cost characteristics of special access. Thus, in markets where CLECs provide competition to certain groups of customers, ILECs will find it necessary to meet the competitive prices of CLECs. These competitive prices will then prevail throughout the market because of non-discrimination provisions. Thus, CLECs do not need to be present in every part of a market for their competitive effect to be present throughout the market.

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<sup>66</sup> FCC, SBC Communications, Inc., *Forfeiture Order*, October 9, 2002; subsequently see reversal on grounds unrelated to FCC’s capacity to enforce in U.S. Circuit Court of Appeals for the District of Columbia, *SBC v. FCC*, No. 03-1147, released May 13, 2005.

<sup>67</sup> FCC, File No. EB-02-IH-0683, EB-02-IH-0805, Order and Consent Decree with BellSouth, July 17, 2003.

<sup>68</sup> FCC, File No. EB-04-MD-010, Memorandum Opinion and Order, December 9, 2004.

<sup>69</sup> FCC, File No. EB-01-MD-001, EB-01-MD-002, Memorandum Opinion and Order, May 30, 2001; see also dissent of H. Furchtgott-Roth.

<sup>70</sup> See, e.g., J. Hausman, “Regulated Costs and Prices in Telecommunications,” in G. Madden ed. *International Handbook of Telecommunications*, 2003.

<sup>71</sup> J. Hausman, “From 2G to 3G: Wireless Competition for Internet-Related Services,” in *Broadband: Should We Regulate High-Speed Internet Access?*, (R.W. Crandall and J. H. Alleman, eds), (Washington, DC: AEI-Brookings Joint Center for Regulatory Studies), 2002, at 126-127.

The FCC may receive comments in this and other proceedings that describe various market shortcomings and even instances of firm misconduct. We believe that appropriate remedies exist to address those concerns, but we are skeptical that those remedies will rationally necessitate an expansion of any form of price regulation including price regulation of special access. Nearly ten years after the passage of the Telecommunications Act of 1996, our government's legal and economic rationality should not be so diminished as to find no legal remedy other than price regulation.

## **VII. Efficient rate regulation does not support rate-of-return regulation**

If, despite all market evidence and economic analysis to the contrary, the FCC were to determine that expansion of existing price regulation for special access services were necessary, the FCC should avoid the specific forms of price regulation reviewed in the NPRM. In particular, rate-of-return regulation, discussed in the NPRM at paragraphs 35-37 and 59-68, has long been recognized by economists as inefficient and distortionary.<sup>72</sup> Rate-of-return regulation distorts capital investment decisions leading to excessive investment in regulated activities. We find no support in contemporary economics for rate-of-return regulation.

Rate-of-return regulation also poses economically unanswerable questions, such as: "What is the correct rate of return?"<sup>73</sup> The NPRM raises this question, perhaps rhetorically, but the FCC should be wary of any simple answers claiming economic foundation. In a competitive market, *expected* returns on investments vary substantially depending on risk profiles, size and duration of investment, expectations of inflation, and

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<sup>72</sup> See, e.g., H. Averch and L.L. Johnson, "Behavior of the Firm Under Regulatory Constraint," *American Economic Review*, December 1962, at 1052-1069.

<sup>73</sup> See NPRM, para. 60.

the range of alternative investment opportunities. Under regulation, setting one rate of return for investments will limit the attractiveness of a wide range of investments under market conditions of risk, length of investment, and other factors that require a higher expected return. On the other hand, a fixed regulated rate of return may not be a binding constraint on some low-yielding investments that a firm would make in any event.

In a competitive market, *realized* returns on investment range from zero to very high returns, as some investments lose all of their value while others perform exceedingly well and still others perform near market norms. It is impossible to look at the realized returns on only one category of investments for a firm and make inferences about its competitive nature.

Rate-of-return regulation also depends heavily on the accuracy and reliability of accounting information submitted to regulatory authorities. The frailties of the financial information included in ARMIS data are widely known.<sup>74</sup> The FCC appears to have doubts about the accuracy and reliability of this financial information. At the very least, the ARMIS data geographic areas are much larger and do not coincide with the MSA geographic areas currently used for special access pricing flexibility.<sup>75</sup>

Special access services use plant and equipment that is also used for both other regulated and other unregulated services. For equipment and facilities that support multiple services, regulators must make assumptions to allocate this shared investment and the associated expenses between these services. As the FCC recognizes, expense and investment allocations are ambiguous and inherently arbitrary.<sup>76</sup>

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<sup>74</sup> See, e.g., FCC, RM No. 10593, Declaration of A.E. Kahn and W.E. Taylor, Nov. 27, 2002, at 7.

<sup>75</sup> See ARMIS study area list at [www.fcc.gov/web/armis/documents/2004PDFs/cosa04.pdf](http://www.fcc.gov/web/armis/documents/2004PDFs/cosa04.pdf).

<sup>76</sup> FCC *Report and Order*, Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, May 22, 2001



The usual justification for regulation of specific prices by the FCC appears to derive from the broad and vague “just and reasonable” language of Section 201 rather than specific statutory obligation to regulate prices. Indeed, in interpreting “just and reasonable” rates, Section 252 specifically prohibits “rate-of-return or other rate based proceeding”<sup>77</sup> and “any rate regulation proceeding to establish with particularity the additional costs of transporting or terminating calls, or to require carriers to maintain records with respect to the additional costs of such calls.”<sup>78</sup>

### **VIII. Conclusion**

For the FCC to continue, much less expand, its rate regulation of special access services, the Commission should have a rational economic basis for such regulation. Price regulation cannot be economically efficient unless certain conditions are met. We find that special access services do not meet any, much less all, of the standard characteristics that economists would use to demonstrate a rational basis for price regulation. Indeed, distortions on investment and other harms are likely to outweigh any conceivable benefits from price regulation.

Much of the BellSouth territory has substantial competition for special access services. Even in those areas with limited competition, the unprofitability of losing even a few customers in a large-fixed cost, small incremental cost market such as special access services means that ILECs have little incentive to raise prices; non-discrimination regulation should be sufficient to protect customers from any plausible market power abuses.

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<sup>77</sup> 47 U.S.C. 252(d)(1).

<sup>78</sup> 47 U.S.C. 252(d)(2).

In this proceeding, the FCC may receive comments from firms with complaints about specific access services. The FCC and other government agencies have many alternatives available to remedy alleged improper conditions without resorting to price regulation.

To the extent courts review economic rationality in FCC rules, it is difficult to see how expanded price regulation of special access services could withstand court review. Perhaps the greatest harm that the FCC could inflict on the telecommunications industry is to write yet another set of rules that may fail court review thereby raising more doubts than certainty about the legitimacy of underlying communications law.

## Appendix A

## Harold W. Furchtgott-Roth

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Furchtgott-Roth Economic Enterprises  
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### Home Address

2705 Daniel Road  
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### Experience

Furchtgott-Roth Economic Enterprises, President  
(2003-present).

Economic consultant.  
Columnist, *New York Sun*, May 2004 – present.

American Enterprise Institute, Visiting Fellow  
(2001-2003).

Federal Communications Commission, Commissioner  
(1997-2001).

One of five commissioners responsible for U.S.  
communications policy, rulemaking, enforcement, and  
adjudication. Among other responsibilities, reviewed all  
major mergers in communications sector. For statements,  
speeches, and other information, see  
<http://www.fcc.gov/commissioners/previouscommish.html>

Committee on Commerce, U.S. House of Representatives, Chief  
Economist, (1995-1997).

One of the principal staff for the Telecommunications Act  
of 1996, Balanced Budget Act of 1995, and electricity  
deregulation legislation for the 105th Congress.

Economists Incorporated, Senior Economist (1988-1995).

Center for Naval Analyses, Research Analyst, (1984-1988).

**Experience  
(continued)**

Stanford University, Research Assistant, and Teaching Assistant for public finance, (1980-1983).

U.S. Department of Energy, Conservation and Renewable Energy Program, Research Assistantship, (1981-1982).

Office of Management and Budget, Intern, (Summer 1980).

Congressional Budget Office, Assistant Analyst, (1978-1979).

U.S. Department of Labor, Pension and Welfare Benefits Program, Intern, (Summer 1977).

MIT, Center for Transportation Studies, Research Assistant, (1976-1978).

U.S. Senate Committee on Appropriations, Internship sponsored by MIT Political Science Department, (Summer 1976).

**Education**

Ph.D., Stanford University, Economics, 1986

S.B., Massachusetts Institute of Technology, Economics, 1978.

University of South Carolina, 1973-1974.

**Honors**

Awards for FCC achievements from various civic and business groups

Visiting Fellow, University of Warwick, (Summer 1984).

Research Fellow, Brookings Institution, (1983-1984).

National Merit Scholar, MIT, (1974).

**Professional Societies**

American Economics Association  
Econometrics Society  
Federalist Society

**Boards**

Washington Legal Foundation Legal Policy Advisory Board  
Telecommunications Policy Research Conference, Treasurer  
University of Richmond School of Law Intellectual Property  
Institute Advisory Board  
KMB Video Journal Advisory Board  
Member of panel to support National Security Agency  
study on protecting the U.S. telecommunications  
infrastructure (2003 – 2004).

**Books**

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(Washington, DC: The Brookings Institution), 1996.

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Owen, D.A. Argue, G.J. Hurdle, and G.R. Mosteller, (Westport,  
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“Intellectual-Property Law Deserves More Respect,” *New York Sun*, March 29, 2005.

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“New Chairman to Bring Needed Legal Clarity,” *New York Sun*, March 17, 2005.

“Our National Economic Insecurity,” *New York Sun*, March 15, 2005.

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“Corporate Racketeering In Requiem,” *New York Sun*, February 9, 2005.

“Broadcast Ownership Rules Need Review,” *New York Sun*, February 2, 2005.

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"Report of the Phase I Seminar of HIGH PORT 87," CNA CRM 87-41, March 1987, with G. Akst, R.R. Odell, and M.D. Tierney.

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R. Davison.

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Testimony Before the U.S. House of Representatives, Committee on Commerce, the Subcommittee on Telecommunications, Trade and Consumer Protection. Hearing on the FCC's Low-Power FM: A Review of the FCC's Spectrum Management Responsibilities and H.R. 3439, the Radio Broadcasting Preservation Act. February 17, 2000.

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Testimony on the E-rate program at Hearing before the Subcommittee on Oversight of the House Ways and Means Committee. August 4, 1998.

Hearing on FCC Reauthorization before the Subcommittee on Communications of the Senate Committee on Commerce, Science, and Transportation. June 10, 1998.

Hearing on FCC Nomination before the Senate Committee on Commerce, Science, and Transportation. October, 1997.

**Other Government Testimony**

Hearing on the Early Reauthorization of the Regulatory Commission of Alaska, before the Senate Judiciary Committee of the Alaska State Legislature, June 12, 2002.

For FCC statements and publications, see

<http://www.fcc.gov/commissioners/previous/furchtgott-roth/statements.html>.



## Appendix B

**JERRY A. HAUSMAN**  
Massachusetts Institute of Technology  
Department of Economics  
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Cambridge 02139  
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**EDUCATION:**

OXFORD UNIVERSITY  
D. Phil. 1973 (Ph.D)  
B. Phil. 1972

BROWN UNIVERSITY  
A.B. (Summa Cum Laude), 1968

**THESIS:** "A Theoretical and Empirical Study of Vintage Investment and Production in Great Britain,"  
Oxford University, 1973.

**FELLOWSHIPS, HONORS AND AWARDS:**

Phi Beta Kappa  
Marshall Scholar at Oxford, 1970-1972  
Scholarship at Nuffield College, Oxford, 1971-1972  
Fellow, Econometric Society, 1979.  
Frisch Medal of the Econometric Society, 1980  
Fisher-Schultz Lecture for the Econometric Society, 1982  
John Bates Clark Award of the American Economic Association, 1985  
Jacob Marschak Lecture for the Econometric Society, 1988  
Fellow, National Academy of Social Insurance, 1990  
American Academy of Arts and Sciences, 1991.  
Fellow, Journal of Econometrics, 1998.  
Shann Memorial Lecture for the Australian Economics Society, 2003  
Cemmap International Fellow, University College London, 2004

**EMPLOYMENT:**

	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
1992-	<u>John and Jennie S. MacDonald Professor</u>
1979-	<u>Professor, Department of Economics</u>
1976-79	<u>Associate Professor, Department of Economics</u>
1973-76	<u>Assistant Professor, Department of Economics</u>
1972-73	<u>Visiting Scholar, Department of Economics</u>

	VISITING APPOINTMENTS:
1986-87	<u>Visiting Professor, Harvard Business School</u>
1982-83	<u>Visiting Professor, Harvard University Department of Economics</u>
	<u>Visiting Positions: University of Washington, Brigham Young University, Australian National University, Mc Master University, Ecole Normale Supérieure, Oxford University, University of Sydney, Wuhan University, Beijing University, University of Western Australia, University College London</u>

	U.S. ARMY, ANCHORAGE, ALASKA
1968-70	<u>Corps of Engineers</u>

## PROFESSIONAL ACTIVITIES:

Associate Editor, Bell Journal of Economics, 1974-1983  
Associate Editor, Rand Journal of Economics, 1984-1988  
Associate Editor, Econometrica, 1978-1987  
Reviewer, Mathematical Reviews, 1978-1980  
American Editor, Review of Economic Studies, 1979-82  
Associate Editor, Journal of Public Economics, 1982-1998  
Associate Editor, Journal of Applied Econometrics, 1985-1993  
Advisory Editor, Economics Research Network and Social Science Research, 1998-  
Advisory Editor, Journal of Sports Economics, 1999-  
Member of MIT Center for Energy and Environmental Policy Research, 1973-  
Research Associate, National Bureau of Economic Research, 1979-  
Member, American Statistical Association Committee on Energy Statistics, 1981-1984  
Special Witness (Master) for the Honorable John R. Bartels, U.S. District Court for the Eastern District of New York in Carter vs. Newsday, Inc., 1981-82  
Member of Governor's Advisory Council (Massachusetts) for Revenue and Taxation, 1984-1992  
Member, Committee on National Statistics, 1985-1990  
Member, National Academy of Social Insurance, 1990-  
Member, Committee to Revise U.S. Trade Statistics 1990-1992  
Director, MIT Telecommunications Economics Research Program, 1988-  
Board of Directors, Theseus Institute, France Telecom University, 1988-1995  
Member, Conference on Income and Wealth, National Bureau of Economic Research, 1992-  
Member, Committee on the Future of Boston, 1998  
Member, GAO Expert Panel to advise USDA on Econometric Models of Cattle Prices, 2001-2  
Advisor, China Ministry of Information on Telecommunications Regulation, 2002-

## PUBLICATIONS:

### I. Econometrics

- "Minimum Mean Square Estimators and Robust Regression," Oxford Bulletin of Statistics, April 1974.
- "Minimum Distance and Maximum Likelihood Estimation of Structural Models in Econometrics," delivered at the European Econometric Congress, Grenoble: August 1974.
- "Full-Information Instrumental Variable Estimation of Simultaneous Equation Models," Annals of Economic and Social Measurement, October 1974.
- "Estimation and Inference in Nonlinear Structural Models," Annals of Economic and Social Measurement, with E. Berndt, R.E. Hall, and B.H. Hall, October 1974.
- "An Instrumental Variable Approach to Full-Information Estimators in Linear and Certain Nonlinear Econometric Models," Econometrica, 43, 1975.
- "Simultaneous Equations with Errors in Variables," Journal of Econometrics 5, 1977.
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- "The Design and Analysis of Social and Economic Experiments," invited paper for 43rd International Statistical Institute Meeting, 1981; Review of the ISI.
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- "Full-Information Estimators," in Kotz-Johnson, Encyclopedia of Statistical Science, vol. 3, 1983
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- "Specification Tests for the Multinomial Logit Model," with D. McFadden, Econometrica, 52, 1984.
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## Appendix C

### BellSouth Pricing Flexibility By Study Area

STATE	MSA	Dedicated Transport & Special Access			Channel Terminations to End Users	
		Phase 1 Relief (>15% WC or >30% Rev)	Phase 2 Relief (>50% WC or >65% Rev)		Phase 1 Relief (>50% WC or >65% Rev)	Phase 2 Relief (>65% WC or >85% Rev)
AL	Alabama - Outside MSA Area	No	No		No	No
AL	Anniston	No	No		No	No
AL	Birmingham	Yes	Yes		Yes	No
AL	Florence	No	No		No	No
AL	Gadsden	No	No		No	No
AL	Huntsville	Yes	Yes		Yes	No
AL	Mobile	Yes	Yes		Yes	No
AL	Montgomery	Yes	Yes		Yes	Yes
AL	Tuscaloosa	No	No		No	No
FL	Daytona Beach	Yes	Yes		Yes	Yes
FL	Florida - Outside MSA Area	No	No		No	No
FL	Fort Pierce	No	No		No	No
FL	Gainesville	Yes	Yes		Yes	Yes
FL	Jacksonville	Yes	Yes		Yes	Yes
FL	Melbourne-Titusville-Palm Bay	Yes	Yes		Yes	Yes
FL	Miami-Fort Lauderdale-Hollywood	Yes	Yes		Yes	Yes
FL	Ocala	No	No		No	No
FL	Orlando	Yes	Yes		Yes	Yes
FL	Panama City	Yes	Yes		Yes	No
FL	Pensacola	Yes	Yes		Yes	Yes
FL	Tallahassee	No	No		No	No
FL	West Palm Beach-Boca Raton	Yes	Yes		Yes	Yes
GA	Albany	No	No		No	No
GA	Athens	No	No		No	No
GA	Atlanta	Yes	Yes		Yes	Yes
GA	Augusta, GA/SC	Yes	Yes		Yes	No
GA	Columbus, GA-AL	Yes	Yes		Yes	No
GA	Georgia - Outside MSA Area	No	No		No	No
GA	Macon-Warner Robins	No	No		No	No
GA	Savannah	Yes	Yes		Yes	Yes
KY	Evansville	Yes	Yes		Yes	Yes
KY	Kentucky - Outside MSA Area	Yes	No		No	No
KY	Lexington-Fayette	Yes	Yes		No	No
KY	Louisville	Yes	Yes		Yes	Yes
KY	Owensboro	Yes	Yes		Yes	Yes

**BellSouth Pricing Flexibility By Study Area  
(continued)**

		Dedicated Transport & Special Access			Channel Terminations to End Users	
STATE	MSA	Phase 1 Relief (>15% WC or >30% Rev)	Phase 2 Relief (>50% WC or >65% Rev)		Phase 1 Relief (>50% WC or >65% Rev)	Phase 2 Relief (>65% WC or >85% Rev)
LA	Alexandria	No	No		No	No
LA	Baton Rouge	Yes	Yes		Yes	Yes
LA	Houma-Thibodaux	No	No		No	No
LA	Lafayette	Yes	Yes		Yes	Yes
LA	Lake Charles	Yes	Yes		Yes	Yes
LA	Louisiana - Outside MSA Area	No	No		No	No
LA	Monroe	Yes	Yes		Yes	Yes
LA	New Orleans	Yes	Yes		Yes	No
LA	Shreveport	Yes	Yes		Yes	Yes
MS	Biloxi-Gulfport	Yes	Yes		Yes	Yes
MS	Jackson	Yes	Yes		Yes	Yes
MS	Mississippi - Outside MSA Area	Yes	No		No	No
MS	Pascagoula	No	No		No	No
NC	Asheville	Yes	Yes		Yes	No
NC	Burlington	Yes	No		Yes	No
NC	Charlotte-Gastonia	Yes	Yes		Yes	Yes
NC	Greensboro-Winston-Salem-High Point	Yes	Yes		Yes	Yes
NC	Hickory	No	No		No	No
NC	North Carolina - Outside MSA Area	Yes	No		No	No
NC	Raleigh-Durham	Yes	Yes		Yes	Yes
NC	Wilmington	Yes	Yes		Yes	Yes
SC	Anderson	No	No		No	No
SC	Charleston-North Charleston	Yes	Yes		No	No
SC	Columbia	Yes	Yes		Yes	Yes
SC	Florence	No	No		No	No
SC	Greenville-Spartanburg	Yes	Yes		Yes	No
SC	South Carolina - Outside MSA Area	No	No		No	No
TN	Chattanooga, TN-GA	Yes	Yes		Yes	Yes
TN	Clarksville-Hopkinsville, TN/KY	Yes	Yes		Yes	No
TN	Johnson City-Kingsport-Bristol	No	No		No	No
TN	Knoxville	Yes	Yes		Yes	Yes
TN	Memphis	Yes	Yes		Yes	Yes
TN	Nashville-Davidson	Yes	Yes		Yes	Yes
TN	Tennessee - Outside MSA Area	No	No		No	No

Source: Information provided by BellSouth

## Appendix D

### Changes to BellSouth FCC Special Access Services Tariff

<b>FCC Transmittal Number</b>	<b>Effective Date</b>	<b>Special Access Service Description</b>
901	4/30/2005	Introduced Wavelength <sup>R</sup> Dedicated Ring Service
882	3/31/2005	Introduced the BellSouth Transport Advantage Plan
869	12/30/2004	Network Visibility Service (NVS) enhancement – new Remote Message Interface feature: This new type of NVS interface will allow a customer access to the raw data underlying the standard NVS report data so that the customer can do their own analysis and graphing of their Frame Relay/ATM network's performance.
868	12/30/2004	Introduced new 10 Mbps, 100 Mbps and Fractional 1000 Mbps interface capabilities for LightGate <sup>R</sup> and SMARTRing <sup>R</sup> Services
865	12/15/2004	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement– new Customer Configuration Management Capability: This capability allows a Frame Relay customer who has their Frame ports equipped with NVS to alternatively provision and change PVCs between such ports thru the NVS System without BLS action. The customer purchases Configurable DLCI bundles instead of standard individual DLCI and CIR rate elements.



861	12/17/2004	BellSouth Metro Ethernet Service – new 100M Dedicated Connection and Premium Connections (with features): BLS restructured and renamed Native Mode LAN Interconnection (NMLI) service to be Metro Ethernet in this filing. A new dedicated 100 Mbps Connection was made available. Also using the next-generation capabilities of current Ethernet switches, new Premium Connections with increased functionality and optional service features were introduced with service level agreements for performance quality. (Premium Connections offered from 10 Mbps to 500 Mbps...with burst capability up to 1 Gbp).
835	7/17/2004	Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement– two new IMA interfaces at 10.752 Mbps & 12.288 Mbps: IMA (Inverse Multiplexing of ATM) ports provide the new speed ATM switch interfaces and use multiple DS1 facilities bonded together as transport.
823	5/29/2004	Introduction of New End User Aggregation (EUA) Service Enhancements
822	5/28/2004	Introduced new Flex DS1 and 1000 Mbps interfaces for SMARTRing Service
801	3/26/2004	Introduction of 3Mb ADSL Service
782	1/30/2004	Introduction of new ADSL EUA rate element options
781	01/22/2004	Introduced new DS1 and DS3 Surveillance options for FlexServ <sup>R</sup> Service.
779	1/9/2004	Introduction of 384Kbps x 384Kbps BellSouth ADSL Service

767	12/16/2003	Exchange Access Frame Relay Service (XAFRS), Managed Shared Frame Relay Service (MSFRS), Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new feature for Special Provisioning: The Special Provisioning feature purchased for two designated Frame or ATM ports, provides diversity where possible to minimize the risk that a single point of failure will result in a service interruption for both ports in this special provisioning relationship.
752	10/23/2003	Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new 1.536 Mbps Circuit Emulation port: ATM Circuit Emulation (DS1) ports allow the interworking of ATM Service with time division multiplexed (TDM) services (such as dedicated DS1 SPA service). The ATM Circuit Emulation port allows the encapsulation of the TDM service into ATM cells using AAL1 adaptation to transport the voice, data or video from the TDM service across the ATM network.
736	8/29/2003	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) Enhancement– new MultiLink interfaces: Provides Frame customers with port speeds greater than DS1 but less than DS3. MultiLink utilizes multiple DS1 facilities bonded together as the transport facilities for the MutliLink sub-T3 speeds.
732	7/15/2003	Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new ATM Flat Rate VBR PVC capability: Allows an ATM Customer to purchase an average amount of bandwidth for his ATM port for the purpose of carrying VBR real-time and/or VBR non-real time PVCs, paying for the bandwidth on a per ATM Connection basis rather than on a per PVC basis.
730	7/9/2003	Adds interface option to BellSouth ADSL Service, End User Aggregation (EUA)

728	6/28/2003	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new Intelligent PVC capability: Standard PVCs are mapped between two Frame ports, identified as originating to primary terminating ports; a PVC with Intelligent PVC capability has a second terminating port identified to which data is automatically rerouted for this individual PVC if the Frame network detects that the primary terminating port has failed.
726	06/21/2003	Introduced Web Access and STS-1 and VT1.5 Channel Connections for FlexServ Service.
723	6/14/2003	Introduction of 256Kbps x 128 Kbps (low speed) ADSL
720	5/15/2003	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new MultiCast PVC feature: Allows a Frame customer to create a MultiCast PVC which is a one-to-many uni-directional broadcasting PVC that distributes data simultaneously from a host Frame port to a group of predetermined remote Frame ports.
712	4/30/2003	Introduced Optical Transport levels for BellSouth Managed Shared Network Service
701	2/26/2003	Introduced new DS3 and STS-1 interface capabilities for LightGate and SMARTRing Services
699	3/8/2003	Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new ATM Service IMA UBR Activation Charge. UBR Activation Charges are to recover an average amount of ATM service bandwidth for best effort UBR PVC traffic on a per port basis. UBR Service Activation Charges were introduced for IMA port speeds.
698	2/21/2003	Introduced 1.25 and 2.5 Gbps point-to-point Wavelength Service capabilities

689	12/31/2002	Exchange Access Frame Relay Service (XAFRS), Managed Shared Frame Relay Service (MSFRS), Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new Back-Up Capability feature: Provides a secondary port to which a customer's packets are directed if the primary port fails.
685	12/19/2002	Introduction of Native Mode LAN Interconnection (NMLI) Service: NMLI is a high speed fiber optic transport service for the interconnection of a customer's LANS and/or other high-speed data devices, based upon early Ethernet technologies.
680	12/10/2002	Introduction of BellSouth Enterprise DSL Service (EDSL)
675	11/21/2002	Introduction of Network Visibility Service (NVS) for packet services (Exchange Access Frame Relay & ATM and Managed Shared Frame Relay & ATM Services): NVS provides network management, monitoring and reporting capabilities for the Frame and ATM service within a customer's network.
670	10/11/2002	Exchange Access ATM Service (XAATMS) & Managed Shared ATM Service (MSATMS) enhancement – new Subrate T3 and IMA interfaces: For XAFRS, new Subrate T3 speed Frame Relay Network Interfaces use a full DS3 SPA facility; IMA Network Interfaces provide the new speed Subrate T3 Interfaces and use multiple DS1 SPA facilities. For MSFRS Subrate T3 speed Frame Relay Connections provide a Subrate T3 port and T3 facility to customer premises; IMA Connections provide the new Subrate T3 speed Connection and multiple DS1 facilities.
662	8/31/2002	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new Subrate T3 speeds: For XAFRS, provides new Subrate T3 speed Frame Relay Network Interfaces which use full DS3 SPA facilities. For MSFRS provides new Subrate T3 speed Frame Relay Connections which provide a Subrate T3 port and T3 facility to customer premises.

641	6/1/2002	Introduction of Multiple Virtual Circuits (MVC) for BellSouth ADSL
634	5/4/2002	Introduced Switched Access Managed Shared Network Service
630	5/1/2002	Managed Shared Frame Relay Service (MSFRS) & Managed Shared ATM Service (MSATMS) enhancement – new MeetPoint Extended Connections: For Managed Shared Frame and ATM Services, these new Connections provide a port on the BellSouth packet switch and transport within BLS territory to the meetpoint with an Independent Company (ICO). The customer secures the connecting ICO facility from the meetpoint to the customer premises in ICO territory.
626	3/30/2002	Introduced OC-3 and OC-12 SMARTGate <sup>R</sup> service capabilities
603	10/16/01	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new Intermediate Bit Rate speed interfaces. For XAFRS these new speed interfaces provide fractional T1 Frame Relay network interfaces (ports > than DS0 but less than DS1 speeds) which work with multiple DS0 channels of a channelized T1 SPA facility. For MSFRS these new speed Connections provide Subrate T1 Frame Relay service from customer premises to Frame Relay switch using a full T1 facility.
602	10/5/2001	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new Frame Relay to ATM network interworking CIR . This new CIR rate element is used when a customer wishes to have a Frame Relay DLCI be mapped to an ATM PVC Segment using FRF.5 encapsulation.
600	9/20/2001	Introduces ADSL capability allowing NSP to test their end user's access to Network
587	5/1/2001	Introduces new provisioning method for BellSouth ADSL and Multiple Destination/Session capabilities

563	10/2/2000	Introduced OC-192 Local Channel and Interoffice Channel capabilities for LightGate service
	10/31/2000	Exchange Access Frame Relay Service (XAFRS) & Managed Shared Frame Relay Service (MSFRS) enhancement – new Priority PVC capability. New Priority PVC DLCI rate elements allow customers with Frame Relay (XAFRS and MSFRS) to create PVCs whose packets are given higher priority within the packet network than non-priority PVC packets.
547	5/19/2000	Introduction of 192Kbps x 192Kbps BellSouth ADSL Service
	5/23/2000	Introduction of Managed Shared Frame Relay Service (MSFRS) & Managed Shared (MSATMS) Service. Managed Shared Frame & ATM provide packet switched service like XAATMS and XAFRS, but these Managed Shared Frame and ATM Services include the premises to switch transport facilities (i.e., does not require the customer to purchase separate SPA facilities.)
533	12/15/1999	Introduction of Modular Video Transport Service
524	10/26/1999	Introduction of 270Mbps feature for Broadcast Quality Video
522	10/23/1999	Introduced (1) STS-1 Local Channel and Interoffice Channel, (2) OC-12 and OC-48 Interoffice Channel and (3) OC-12 interfaces for LightGate service

## Appendix E

### Contract Tariffs filed by BellSouth with the FCC for Special Access Services

<b>Contract Tariff Description</b>		<b>Contract Tariff Effective Date</b>
<b>1</b>	<b>Contract Tariff #1</b> – Volume & Term Incentive Plan	August 25, 2001
<b>2</b>	<b>Contract Tariff #2</b> – Volume & Term Incentive Plan	October 17, 2001
<b>3</b>	<b>Contract Tariff #3</b> – Volume & Term Incentive Plan	October 24, 2001
<b>4</b>	<b>Contract Tariff #4</b> – Volume & Term Incentive Plan	November 9, 2001
<b>5</b>	<b>Contract Tariff #5</b> – Volume & Term Incentive Plan	December 20, 2001
<b>6</b>	<b>Contract Tariff #6</b> – Volume & Term Incentive Plan with a Service Level Agreement	June 20, 2002
<b>7</b>	<b>Contract Tariff #7</b> – Volume & Term Incentive Plan with a Service Level Agreement	August 17, 2002
<b>8</b>	<b>Contract Tariff #8</b> – Volume & Term Incentive Plan with a Service Level Agreement	August 31, 2002
<b>9</b>	<b>Contract Tariff #9</b> – Volume & Term Plan – Annual/Quarterly Incentives	October 2, 2002
<b>10</b>	<b>Contract Tariff #10</b> – Volume & Term Incentive Plan with a Service Level Agreement	December 14, 2002
<b>11</b>	<b>Contract Tariff #11</b> – Volume & Term Incentive Plan with a Service Level Agreement	January 17, 2003
<b>12</b>	<b>Contract Tariff #12</b> – Incentives for DS1 Service (a.k.a. BellSouth SPA DS1)	February 28, 2004

<b>Contract Tariff Description</b>		<b>Contract Tariff Effective Date</b>
<b>13</b>	<b>Contract Tariff #13</b> – Incentives for SmartRing <sup>R</sup> Service (a.k.a. BellSouth SPA Dedicated Ring)	July 13, 2004
<b>14</b>	<b>Contract Tariff #14</b> – Volume & Term Incentive Plan with a Service Level Agreement	April 1, 2005
<b>15</b>	<b>Contract Tariff #15</b> – Incentives for SmartRing Service (a.k.a. BellSouth SPA Dedicated Ring)	April 9, 2005
<b>16</b>	<b>Contract Tariff #16</b> - Incentives for DS1 Service (a.k.a. BellSouth SPA DS1) (Local Channels)	April 30, 2005
<b>17</b>	<b>Contract Tariff #17</b> - Incentives for SmartRing Service (a.k.a. BellSouth SPA Dedicated Ring)	April 30, 2005
<b>18</b>	<b>Contract Tariff #18</b> - Incentives for SmartRing Service (a.k.a. BellSouth SPA Dedicated Ring)	April 30, 2005
<b>19</b>	<b>Contract Tariff #19</b> – <i>RESERVED FOR FUTURE USE</i>	--
<b>20</b>	<b>Contract Tariff #20</b> - Incentives for DS1 Service (a.k.a. BellSouth SPA DS1) (Interoffice Channels)	April 30, 2005